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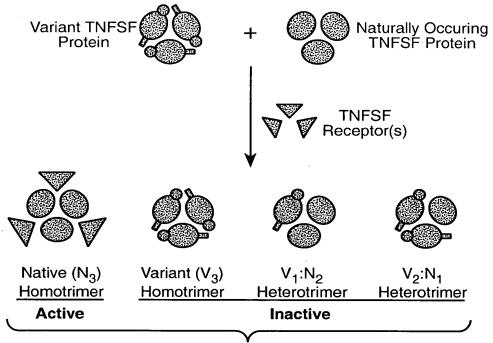


FIG.\_1



FIG.\_2

Figure 3

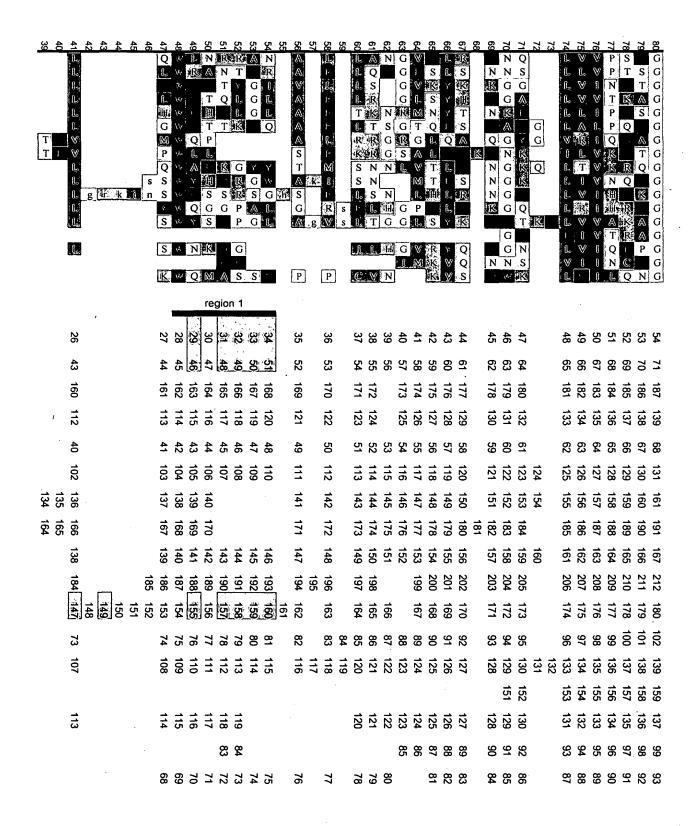


Figure 3

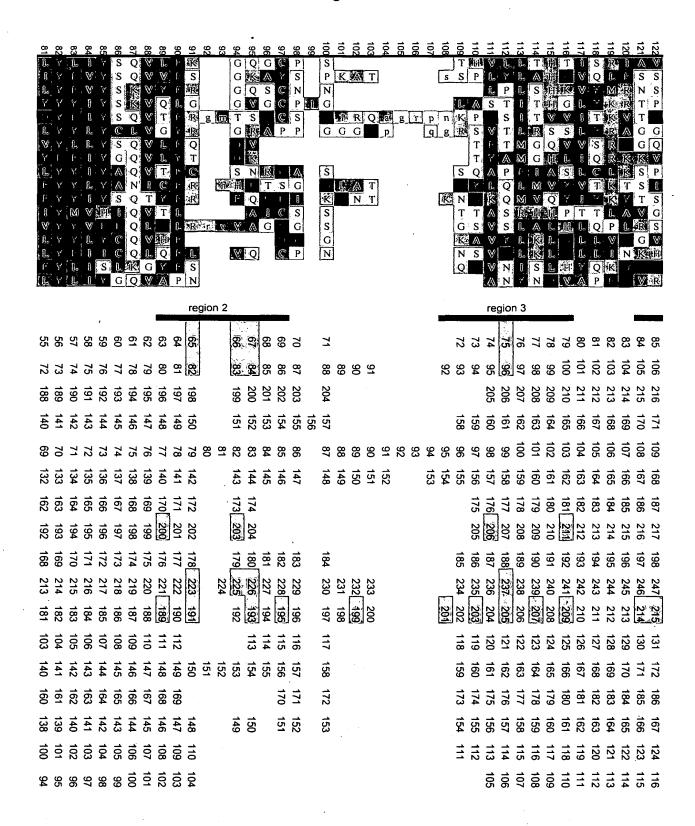


Figure 3

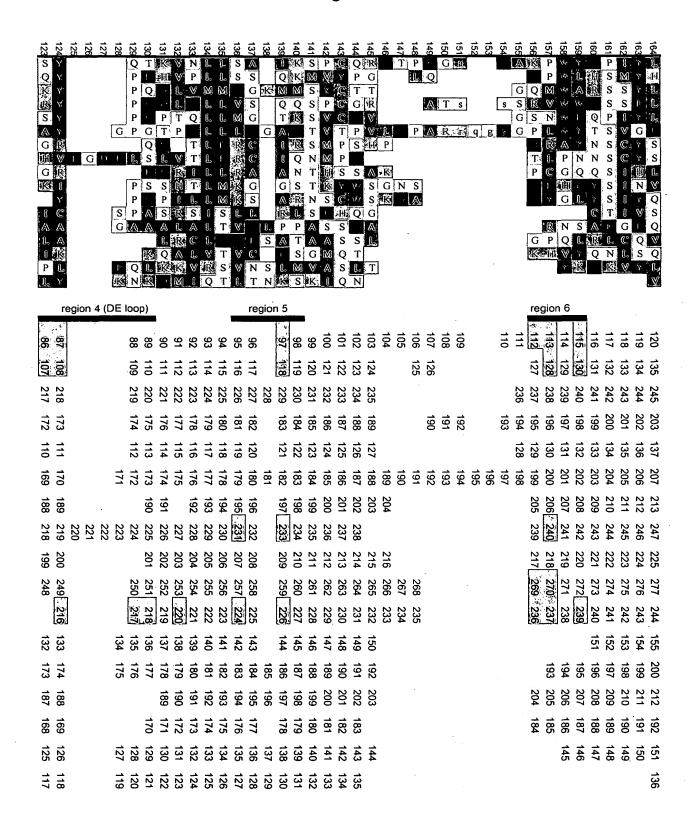


Figure 3

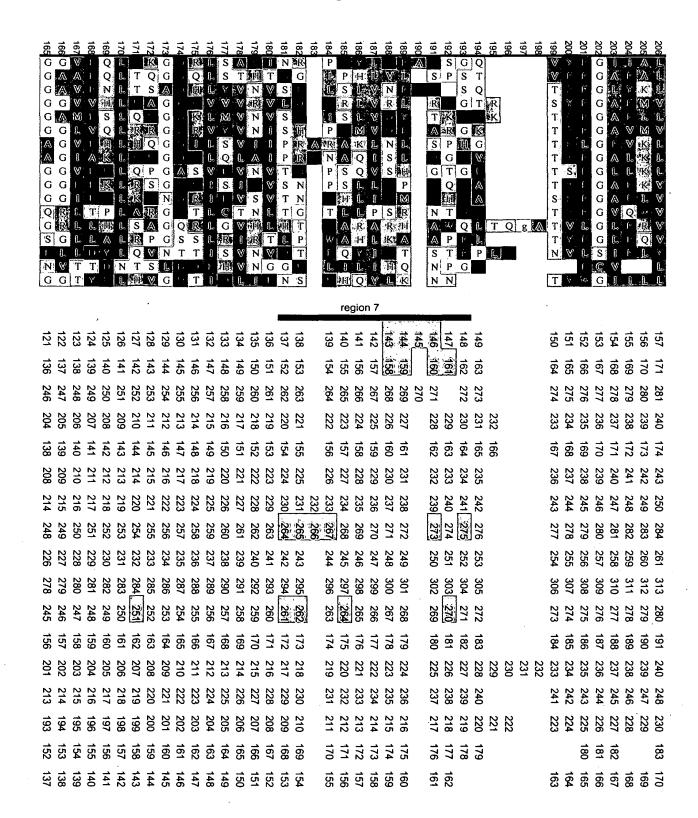
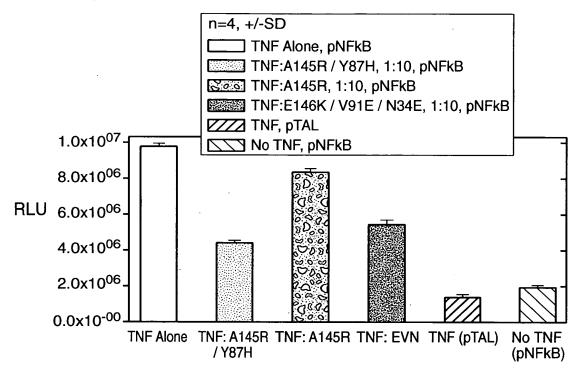


Figure 3

TNFSF Ligand TNFA TNFB (LT-α) FASL LIGHT VEGI TNFC (LT-β) APRIL BLyS CD40L RANKL TRAIL CD27L 4-1BBL TWEAK	J P P P S P S P S P S P S P S P S P S P		N a t l s s	P Q A G Q N S S N S R S M P N S S I T B S G G P P P A A S S T T S M S S T T T S M S S S M P S G S M S S M S S M S S M S S M S S M S T T T S M S M S S M S S M S S M S S M S M S S M S M S S M S
CD30L OX40L	APKKS KG	LLTSQ		IN RIM
AITRL		<u>a M. Di</u>	<u>*K</u> ]	G P P S
, TNFA	<del>1</del> 12	18 17 16 14 13	<u>.</u>	25 24 25 26 27 27
TNFB (LT-α)	2 29	8 35 7 34 6 33 5 32 5 32 3 30		5 42 4 41 3 40 2 39 1 38
FASL	9 145	5 151 4 150 3 149 3 149 2 148 1 147 0 146		2 159 1 158 0 157 9 156 8 155 8 155
LIGHT	5 94 93	1 100 0 99 0 98 9 97 7 96 6 95		9 111 8 110 7 109 107 108 6 106 6 106 6 106 104 104 104 104
VEGI			. 3	
	35 8 8	37 5 5 5 5		39 10
TNFC (LT-β)	88 116 87 115	89 91 11 11 11 11 11 11 11 11 11 11 11 11		96 15 15 15 15 15 15 15 15 15 15 15 15 15
APRIL	116 145	122 19 121 19 120 19 119 19 118 19 117 19		133 13 132 16 131 13 130 13 130 13 129 13 128 13 127 13 128 14 127 14 128 14 127 14
BLyS		151 13 150 13 149 13 148 13 147 13 146 13		163 162 162 160 159 159 157 134 156 133 155 132 154 131
CD40L	•	128 1 127 1 126 1 125 1 124 1 123 1		
RANKL	164	170 169 168 167 166 165 165		•
TRAIL		128 127 126 125 123		•
CD27L	67		70	7 7
4-1BBL	91 90 89 88	97 96 95 94 93	98	105 106 107 107 100 100
TWEAK	0		_	
CD30L	98 97 96 94 93	3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	106 106	1112 1111 1110 1109 109
OX40L	74 73	76 75	81	82
AITRL		59 58	61	62 63 64 65 66 62 63 64 65 65 67



[10 ng/ml TNF $\alpha$  + 10-Fold Excess Variant]

## FIG.\_4A

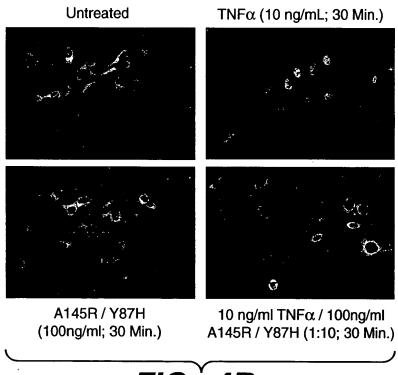
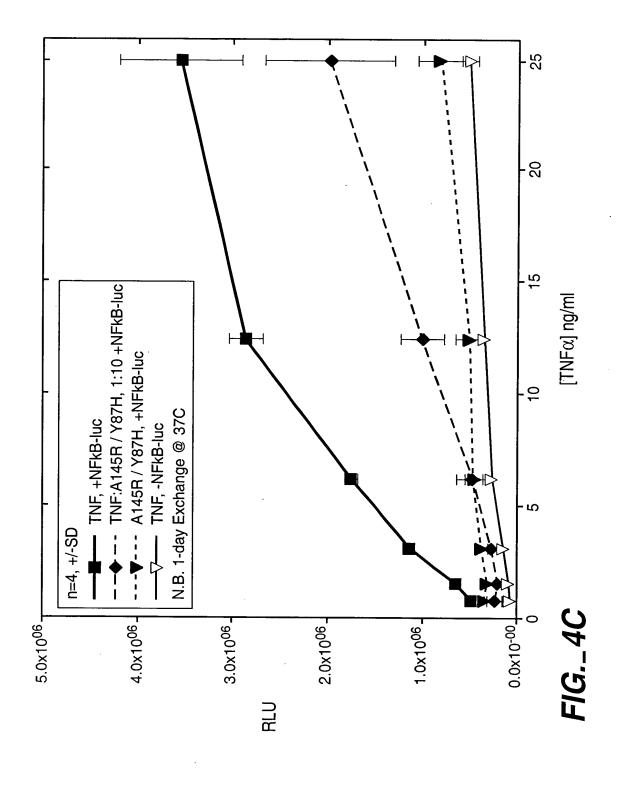
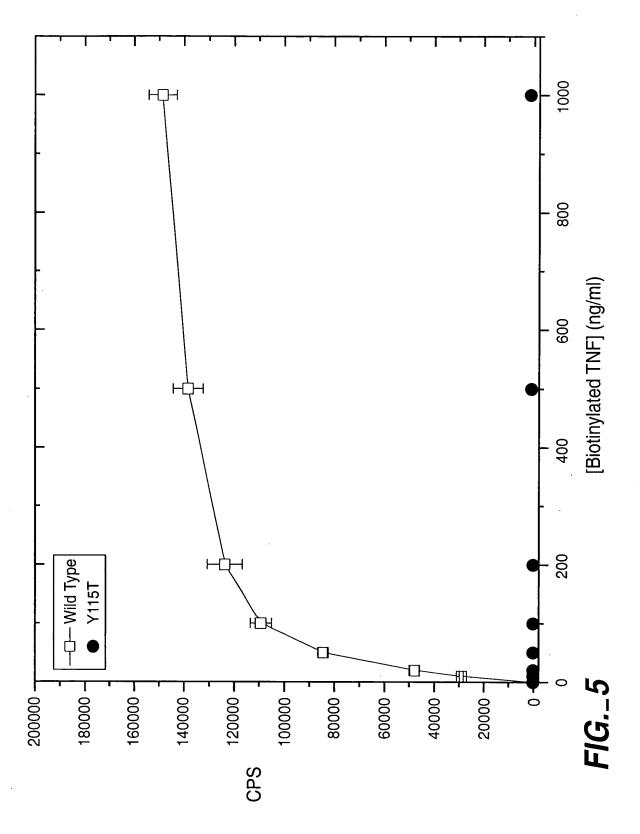


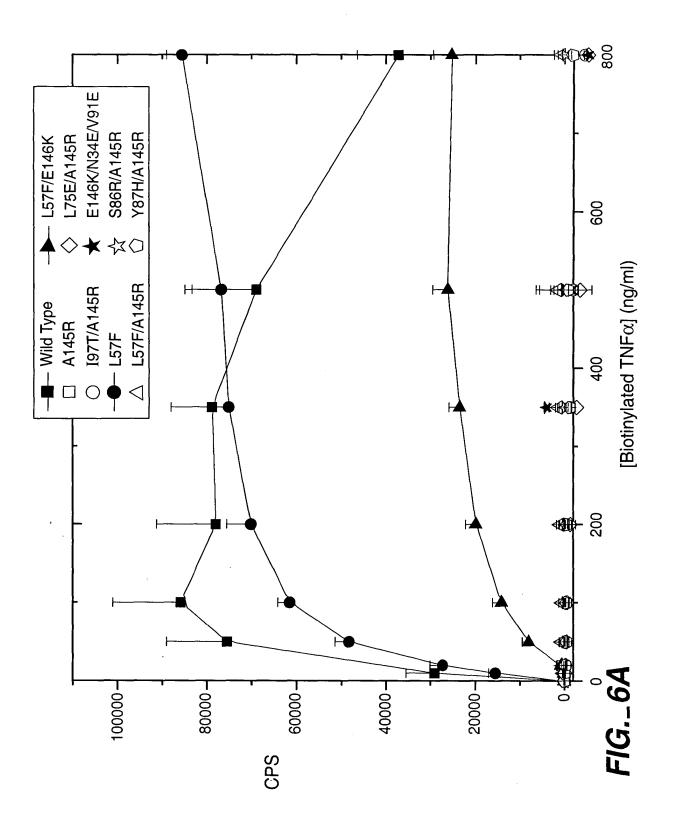
FIG. 4B

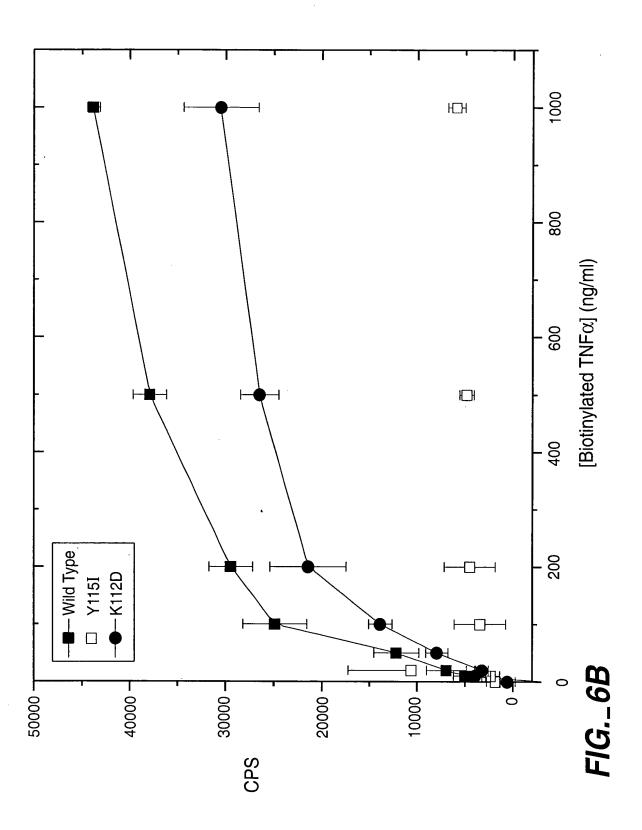


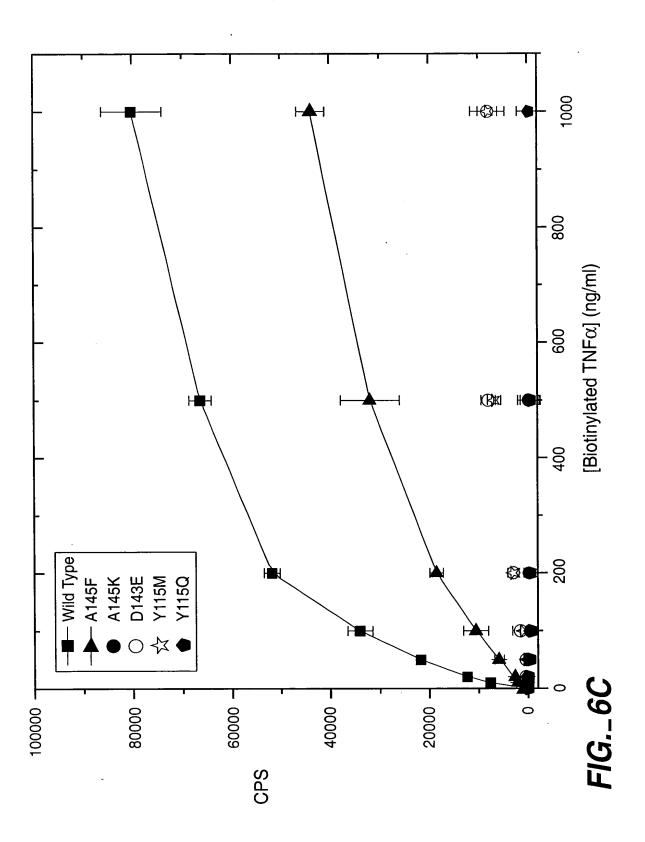
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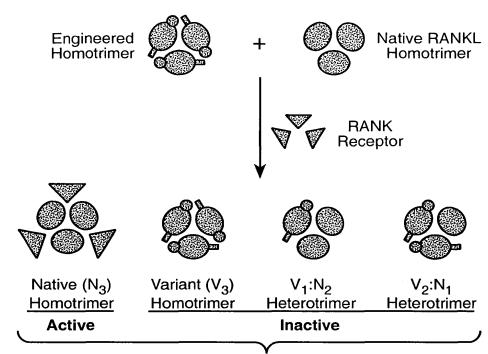






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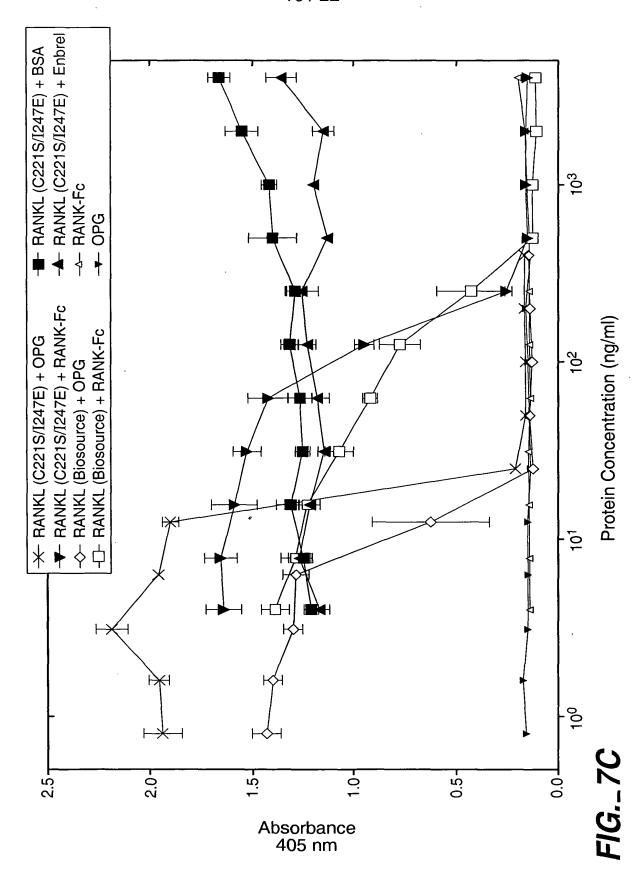


## FIG.\_7A

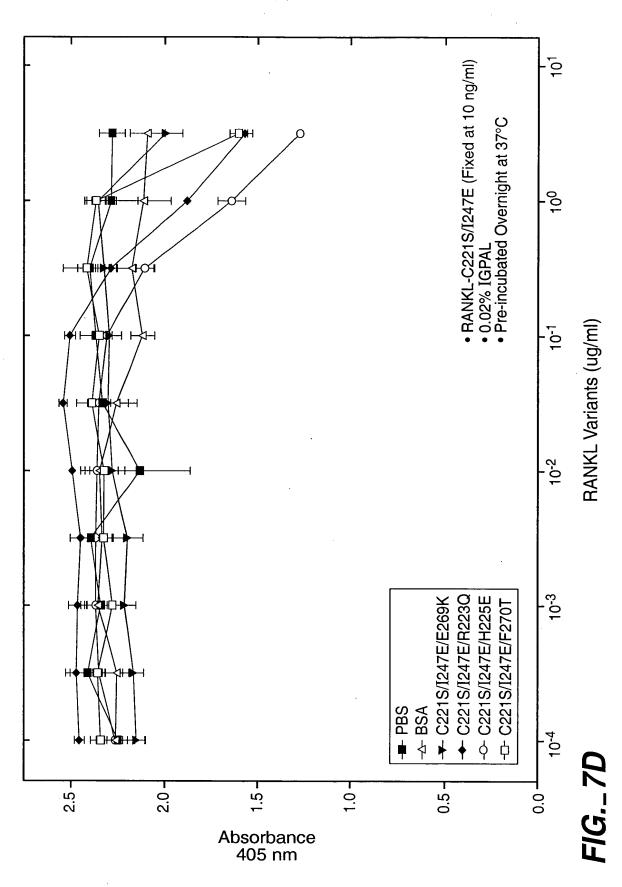
A172R	R191Q	K248E	1249R-S228E
A172Q	G191A	1249Q	K248E-T227K
S179E	R223Q	1249R	K248E-T227Q
S179D	R223E	H253T	R191K-l249R
H180E	R223M	H253S	R191E-I249R
H180N	H225R	S268D	G192A-K248E
H180S	H225N	E269R	D190Q-K248E
K181Q	H225T	E269Q	D190T-K248E
K181E	H225E	E269T	H225R-I249R
K181R	E226Q	E269K	H225N-I249R
S183K	E226R	F270V	E226Q-I249R
S183E	E226D	F270E	E226R-I249R
Y188F	T227K	F270T	H225R-G192A
Y188M	T227Q	F270K	H225N-G192A
Y188Q	S228H	R284E	H225R-D190Q
Y188E	S228E	S297Q	H225R-D190T
H189E	S228D	S297E	G192A-H225R-I249R
H189A	T233R	S297D	G192A-H225N-I249R
H189R	T233D	D300N	R191K-E226Q-K248E
D190Q	T233E	D302E	R191K-E226R-K248E
D190T	Q237K	D302Q	
R191K	Q237E	D302H	
R191E	Q237T	I249R-S228H	_
\			,

FIG.\_7B

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 $\perp$ 



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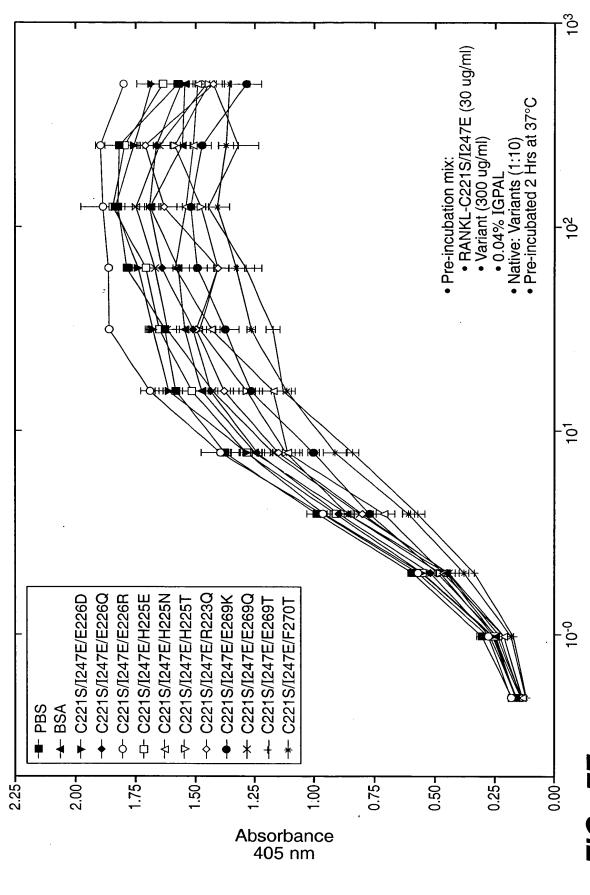
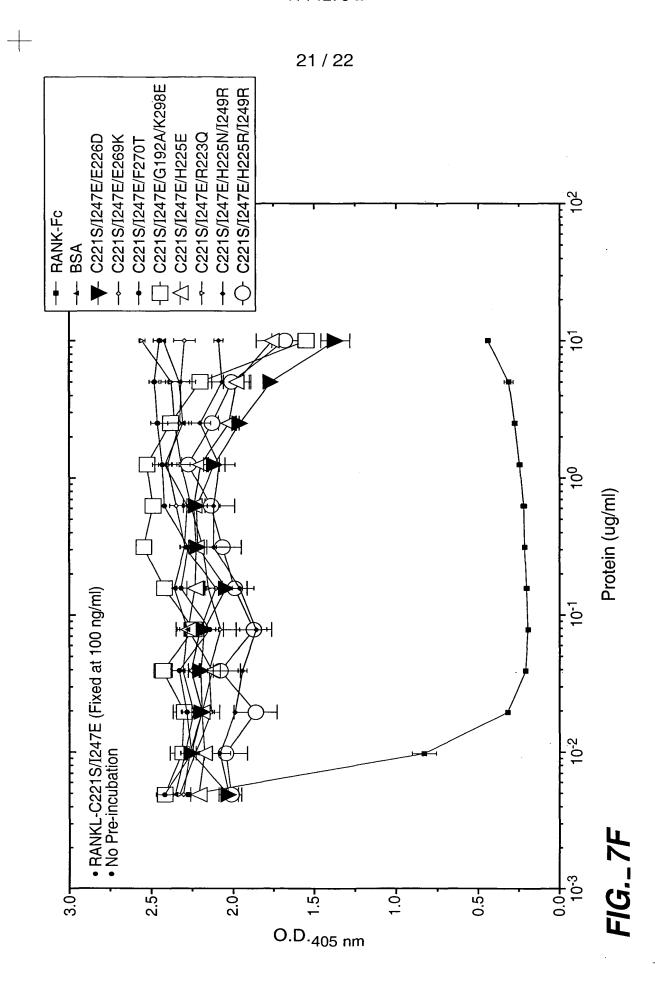


FIG.\_71

Concentration of [RANKL-C221S/I247E (ng/ml)] with 10-fold Excess Variants

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C221S/I247E/E269T C221S/I247E/F270T C221S/I247E/E269K C221S/I247E/H225N C221S/I247E/H225E C221S/I247E/R223Q C221S/I247E/E226D C221S/I247E/G192A/K298E C221S/I247E/H225R/I249R

FIG.\_7G